

What is claimed is:

1. An apparatus for receiving a signal of digital broadcasting service, comprising:

5 an array antenna having a plurality of antenna elements for receiving signals of the digital broadcasting service;

 demodulation means for demodulating the receiving signals corresponding to each of antenna elements in the
10 array antenna;

 beam-forming means for generating a predetermined number of beamformed signal by applying a beam-forming weights in order to steer the beam to a predetermined direction according to the modulated signal from the
15 modulation means; and

 beam selection means for selectively receiving signals of desired direction according to the beam forming signal.

20 2. The apparatus as recited in claim 1, wherein the array antenna is a second predetermined number of axis linear array having a first predetermined number of antenna elements.

25 3. The apparatus as recited in claim 1, wherein the array antenna is a circular array antenna having a third predetermined number of antenna elements.

4. The apparatus as recited in claim 1, wherein the array antenna is a planar array antenna having a third predetermined number of antenna elements.

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5. The apparatus as recited in claim 1, wherein the demodulation means includes a plurality of demodulators as many as the number of antenna elements in the array antenna.

10 6. An apparatus for receiving a signal of digital broadcasting service, comprising:

switched beamforming means for generating a beamformed signal in order to direct a predetermined number of angle by applying a beam-forming weight to received
15 signal of digital broadcasting service and selectively receiving a signal of desired direction.

7. The apparatus as recited in claim 6, wherein the switched beamforming means includes:

20 beam-forming means for generating a predetermined number of beamformed signals by applying beam-forming weights in order to steer the beam to a predetermined direction to receive a digital broadcasting signal; and

beam selection means for selectively receiving signal
25 of desired direction according to a predetermined number of beam forming signals generated by the beam forming means.

8. The apparatus as recited in claim 7. wherein the beam-forming means outputs signal by eliminating receiving signals of multipath to a channel equalizer in order to improve equalization performance of the channel equalizer.

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